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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,793	11/18/1999	DAVID E. ALBRECHT	505-02	7726

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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/443,793

Applicant(s)

ALBRECHT, DAVID E.

Examiner

Alison K. Pickard

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 28-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 28-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5,765,835) in view of Aichroth (3,167,322) in view of Jones (2,278,721).

Johnson discloses an apparatus providing a seal between two port faces comprising a planar, one-piece plate 33 having plural bolt holes 25 and an opening. A seal (o-ring) 41 is disposed within the boundary of the opening. A support ring 29 is disposed within the seal. The plate 33 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate (see Fig. 1) and adjacent to the support ring. The support ring is chamfered (at 31) on an outer portion. Johnson does not disclose the seal is annular (i.e. circular). Aichroth teaches an apparatus providing a seal between port faces comprising a plate, seal, and support ring. Aichroth teaches that the apparatus can be circular or rectangular. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the seal (and therefore, the apparatus) annular as such are considered art equivalent shapes as taught by Aichroth.

Johnson does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46.

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Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is oriented between two surfaces similar to those of Johnson. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Johnson. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the support ring of Johnson with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

3. Claims 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aichroth in view of Rode (3,561,793) in view of Jones.

Aichroth discloses an apparatus providing a seal between port faces comprising a planar, one-piece plate 26 having an opening. A seal (o-ring) 22 is disposed within the boundary of the opening. A support ring 24 is disposed within the seal. The plate 26 has a pair of parallel surfaces. The opening allows a flow path perpendicular to the plate. The support ring is chamfered (at 32) on an outer portion. Aichroth does not disclose the plate 26 had plural bolt holes. Rode teaches an apparatus between port faces having a plate, seal, and support ring. As seen in Figure 8, the plate 102 can be provided with bolt holes to confine and secure the apparatus with the port faces (see col. 4, lines 25-33). Therefore, it would have been obvious for

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one of ordinary skill in the art at the time the invention was made to modify the plate of Aichroth with bolt holes as taught by Rode to secure the apparatus in place.

Aichroth does not disclose that the support ring has an orifice providing a fluid connection between the opening and seal. Jones teaches a seal between two port faces (of items 4 and 1, seen best in Figures 2 and 3). The seal comprises a support ring 38 disposed within a seal 46. Jones teaches using an orifice 39 to provide a fluid connection between the opening (i.e. inner circumference of the ring 38) and the seal 46 to ensure a fluid tight seal. The orifice allows fluid pressure to press the seal upward, outward, and downward into fluid sealing abutment with the surfaces of the joint (see page 2, line 73 through page 3, line 10). (Note: the seal of Jones is oriented between two surfaces similar to those of Aichroth. The orifices of Jones are arranged generally parallel to these surfaces and would be arranged parallel to the surfaces of Aichroth. Also, the end of the orifice would be immediately adjacent and in connection with the path because the support ring is.) Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the support ring of Aichroth with the orifices taught by Jones so that fluid pressure within the opening is communicated to the seal to force it into fluid tight sealing engagement and prevent leakage through the joint.

Regarding claims 31 and 35, Aichroth discloses two chamfers 32 at an angle with the axis of the support ring. However, Aichroth does not disclose that the angle is about 45 degrees. It is not considered inventive to discover the workable or optimum ranges by routine experimentation. See *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to make the chamfer at an angle of 45 degrees.

Response to Arguments

4. Applicant's arguments filed 12-5-05 have been fully considered but they are not persuasive.

Applicant argues that Johnson is not a hydraulic fluid system. This argument is unpersuasive because the hydraulic fluid and system are not being positively claimed. The claim recites a seal for use with such a system, i.e. intended use. Johnson is capable of being used in a hydraulic system. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

The arguments relating to Jones are unpersuasive. First, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case both Johnson and Aichroth already disclose a support ring comprising a path. Applicant intends the path "for" hydraulic fluid flow. Again, this is intended use. The hydraulic fluid is not being positively claimed. It should be noted, however, that Aichroth does disclose liquid fluid. Thus, using the teaching of Jones to modify the support rings of Johnson and Aichroth with an orifice would provide an end of the orifice immediately adjacent to and in fluid connection with the path as required by the claims. Also, the fluid in Jones is not static. The fluid is under pressure and thus inherently is flowing. If the fluid were

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not flowing, it wouldn't flow through the orifices in the ring to enhance seal 46. How else would the pressure tightness of the joint be tested? Regardless, the end of the orifice 39 in the ring IS immediately adjacent to the path that the ring defines. And fluid is flowing in that path, for example, in chamber 73.

Regarding the interview (i.e. of 3/16), the examiner regrets any inconvenience this may have caused. The examiner directs Applicant's attention to Figure 28 of Breaker '257. This embodiment discloses a plate (near line 2010) having a boundary, an annular seal 2026 contacting the boundary, and support ring 2081. The support ring has plural orifices that are in direct fluid communication with a hydraulic fluid, as the seal is part of a hydraulic system. The outer plate does not have boltholes. However, this is considered an obvious modification in view of the teachings of Rode, for example.

As seen by both Breaker and Jones, the use of an orifice in a support ring to provide fluid communication between a path and seal is known.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 571-272-7062.

The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tricia Engle can be reached on 571-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alison K. Pickard
Primary Examiner
Art Unit 3673

AP